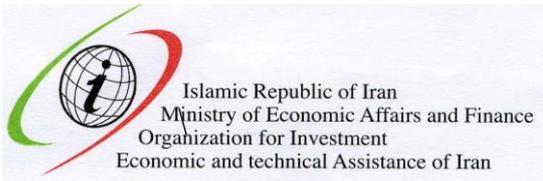




10. Project Status:

- Feasibility study available? Yes  No
- Required land provided? Yes  No
- Legal permissions (establishment license, foreign currency quota, environment, etc) taken? Yes  No
- Partnership agreement concluded with local/foreign investor? Yes  No
- Financing agreement concluded? Yes  No
- Agreement with local / foreign contractor(s) concluded? Yes  No
- Infrastructural utilities (electricity, water supply, telecommunication, fuel, road, etc) procured? Yes  No
- List of know-how, machinery, equipment, as well as seller / builder companies defined? Yes  No
- Purchase agreement for machinery, equipments and technology concluded? Yes  No



**Financial Structure**

11. Finance

Description	Local Currency Required			Foreign Currency Required Million Dollar	Total Million Dollar
	Million Rials	Rate	Equivalent in Million Dollar		
Fix Capital	15549.25	37019 Rials for each Dollar	0.42	0	0.42
Working Capital	1555.33		0.042	0	0.042
Total Investment	17104.58		0.462	0	0.462

- Value of foreign equipment/machinery: 0 million dollar
- Value of local equipment/machinery: 9073.25 million dollars
- Value of foreign technology: million dollar
- Value of local technology: million dollar
- Net Present Value (NPV): 10380 Million Rials for 10 Year
- Internal Rate of Return (IRR): 29.97%
- Payback Period (PP): 23.2%



## Plan summary

### 1. Product or services introduction

#### 1.1. The goal of this plan

The main goal of this plan is to establish a pisciculture in cage complex in a land with area of 10000 m<sup>2</sup> and marine width of the 12000m<sup>3</sup> in Lorestan. The direct employment includes 14 persons and the operational planning is for 12 hours a day in 350 days/year.

#### 2.1. The features and advantages of plan

Promotion of aquatic animals industry breeding in cage can include allowed animals with internal and Muslim states' target market while there are many species which can be exported in this industry with particular place. The systematic and plannable process of production of products in in-cage pisciculture feeds many industries such as can making, powder production, and packing and cutting meat centers and maximizes the efficiency of this industry. In other word, this procedure can be the foundation of establishing complexes of fisheries clusters and would be safe against the common fluctuations in traditional fish hunting. The other capability of this plan is to provide employment which can provide the remote and under-developed places with large number of jobs. In addition, this process can be a suitable substitution for obsolete traditional hunting methods or using the unsafe boats.

The minimization of costs in comparison to pisciculture in clay pools or closed-circuit systems, more facile management with lower costs, facility in investigation and observation of the fishes health and food, facility and economical process of saving the fished against diseases in comparison with clay or closed-circuit systems and pools are the other features which need lower investment. Among all marine resources such as sea, lake, storage pools, pool, fountains and canals, rivers are useful in this regard which are not used in other ways. In addition, in installing the cages in pisciculture pools, one can use the pool for other aquatic animal's pisciculture and if there was any contamination or colloids in water which are problematic for cages, one can relocate the cages. The reduction of pool construction costs, irrigation channels, water pumping as well as lack of airing operation need is among the other advantages of in-cage pisciculture.

- Different local species bred in all southern and northern on shores
- Environmental conditions and ecological suitable facilities in coastal areas
- Application of novel systems of marine fishes pisciculture in cage
- Production of marine bred fished to reduce the hunting pressure
- Private sections interested in investment

#### 1.3. The ISIC code

Import fee %	Custom tariff	Scale	ISIC code	Title
40	3027300	t	1512512303	Fillet and fresh water fishes fresh meat, cooled
40	3021100	t	1512512312	Fresh water complete fresh cooled fish

#### 1.4. Products' application

Fish is one of the most important and main food products which is fortunately found worldwide and particularly in Iran. Having 2 large northern and southern seas as well as pisciculture in different cities, Iran can produce and access to this useful food and exploit its properties.

#### **The Aquatics converting industries**

The fish production deposition, particularly trout, decreases of people' consumption and purchase power in Iran and stability of exported products caused processing of large amount of aquatics in Iran. It is predicted that 5000 T of hunted aquatics in 2017 are directed toward converting industries. Accordingly, producing the fish sausages and different foods would be started in markets.

#### **Aquatics wastes application**

Today, the application of chemical components in different human life causes that human's tendency to natural and degradable industries become increasing and one of the natural resources is aquatics. The Aquatics are of particular place in life due to important materials such as proteins, minerals and non-saturated fatty acids and making their wastes and play a significant role as a food in term of their pharmaceutical properties. In recent decades also considering the increasing population growth and malnutrition in many parts of the world, aquatics can be of large place in providing the people consumed protein. During the fish processing, there are many wastes such as water and the solid materials separated from the fish. The solid wastes include 27.25% of the main raw materials and depending on the process, they can be mixture of different parts like bones, head and other parts of body. About 23% of the aquatic processing wastes are skin and head which are rich of collagen. The skin, bones and fins' nutrition value is relatively high and these materials are of significant importance for producing the fish flour. The cartilage powder of fishes can be used for different products with therapeutic and pharmaceutical applications. The fish skin can be used for fish collagen and leather. At present, the main source of Chitosan production worldwide is the shrimp and crabs' shell and in shrimp's shell, there is Xanthine with anti-cancer properties. The protein produced of the fish body parts is supplied to the market as a cream with humidity and cleaning properties for skin and refreshing.

#### **Proposed places**

Based on studies, Khoram Abad, Kouh Dasht, Doroud, Delfan, Borujerd and Aligudarz are desirable places for this plan.

#### **Raw, auxiliary and consuming materials**

<b>Annual costs (million rials)</b>	<b>Unit price (R)</b>	<b>Annual consumption</b>	<b>Scale</b>	<b>Raw materials and technical features</b>
2933.3328	4800	611111	No.	8-g fishes
9625	35000000	275	t	Fish food
3000	1500	2000000	C.C.	Complements and disinfectants
15558.33	Total			

### The nominal and practical capacity

Nominal capacity of 250t/year

Practical capacity in average for first year is 60% of the nominal capacity and annually, 10% increase would be gained to reach the 90%.

### Production procedure and technology used

In this procedure, there are fish species with high market acceptance such as trout, Tilapia, carp and etc. which are selected and 2-3 g fish are supplied from domestic or foreign sources to make them gain weight to the 15-20g and then they would be stored in cages of poly ethylene (with 20m of diameter). In this plan, the possibility of automatic and manual feeding is also provided.

### The plan investment costs

%	Total (MILLION RIALS)	Description
5.8	1000	Land
18.1	3098	Building
53	9073.25	Machineries
3.3	571	Installations
7	1200	Vehicles
0.3	57	Service and administrative equipment
0.9	150	Unexpected and miscellaneous, 10%
88.6	15149.25	<b>Total fixed assets</b>
2.3	400	Pre-exploitation costs
90.9	15549.25	<b>Total fixed plan investment costs</b>
9.1	1555.33	Working capital
100	17104.58	<b>Total plan investment</b>

### Working capital

Amount (million rials)	Description	Title
1296.53	A month for raw materials	Raw materials
196.8	A month salary	Salary
62	One month of energy and repair costs	Revolving funds
1555.33	Total	

### Fixed costs and annual production variable

Variable and fixed costs	Variable costs (million rials)	Variable costs %	Fixed cost (million rials)	Fixed costs %	Production costs	No.
15558.3	15558.3	100	0	0	Consumed and raw materials	1
2755	826.5	30	1928.5	70	Salary and wage	2
51.1	40.88	80	10.22	20	Energy costs	3
30.3	0	0	30.3	100	Insurance	4

					(0.002 of fixed investment)	
694.07	555.256	80	138.814	20	Repair and maintenance	5
500	400	80	100	20	Ads and marketing	6
1395.73	0	0	1395.73	100	Depreciation	7
1145	916	80	229	20	Miscellaneous and unpredicted (6%)	8
22129.53	18296.966	Total	3832.564	Total		

Economic index

25000 million Rials	Annual income	Economic indices
10380 million Rials	NPV	
29.97%	IRP	
4.86 years	PBP	

Management and Planning Organization of Lorestan Province